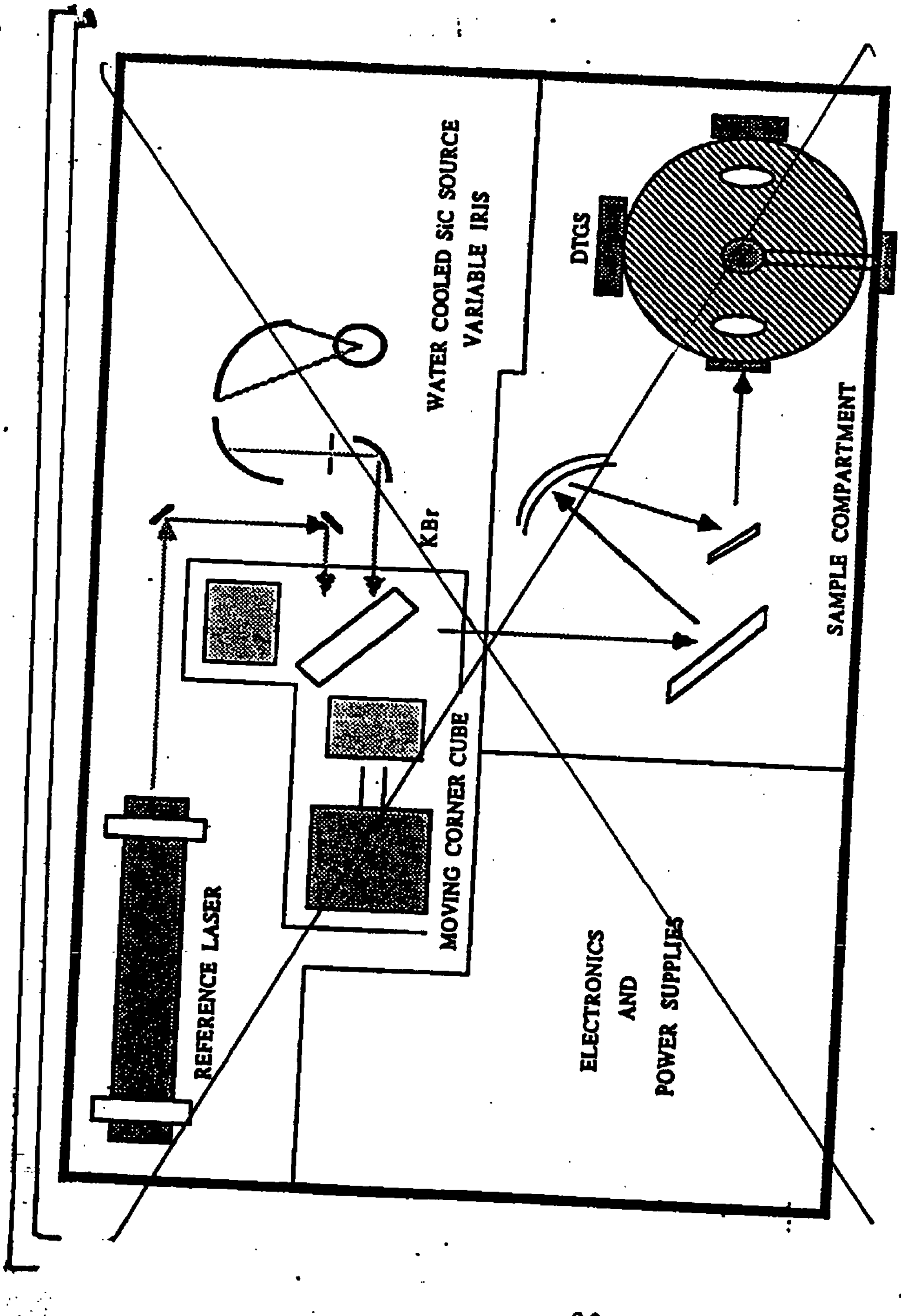
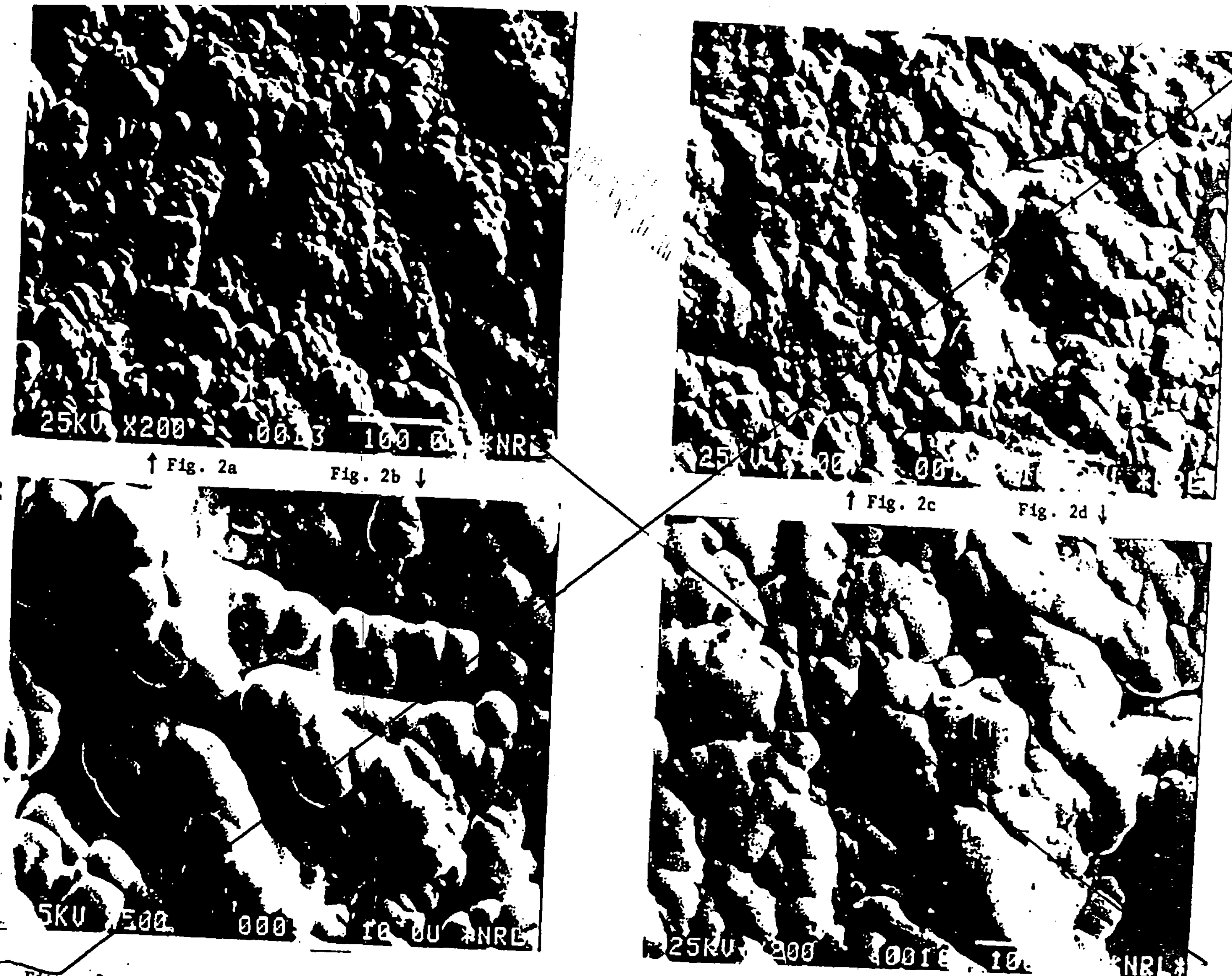
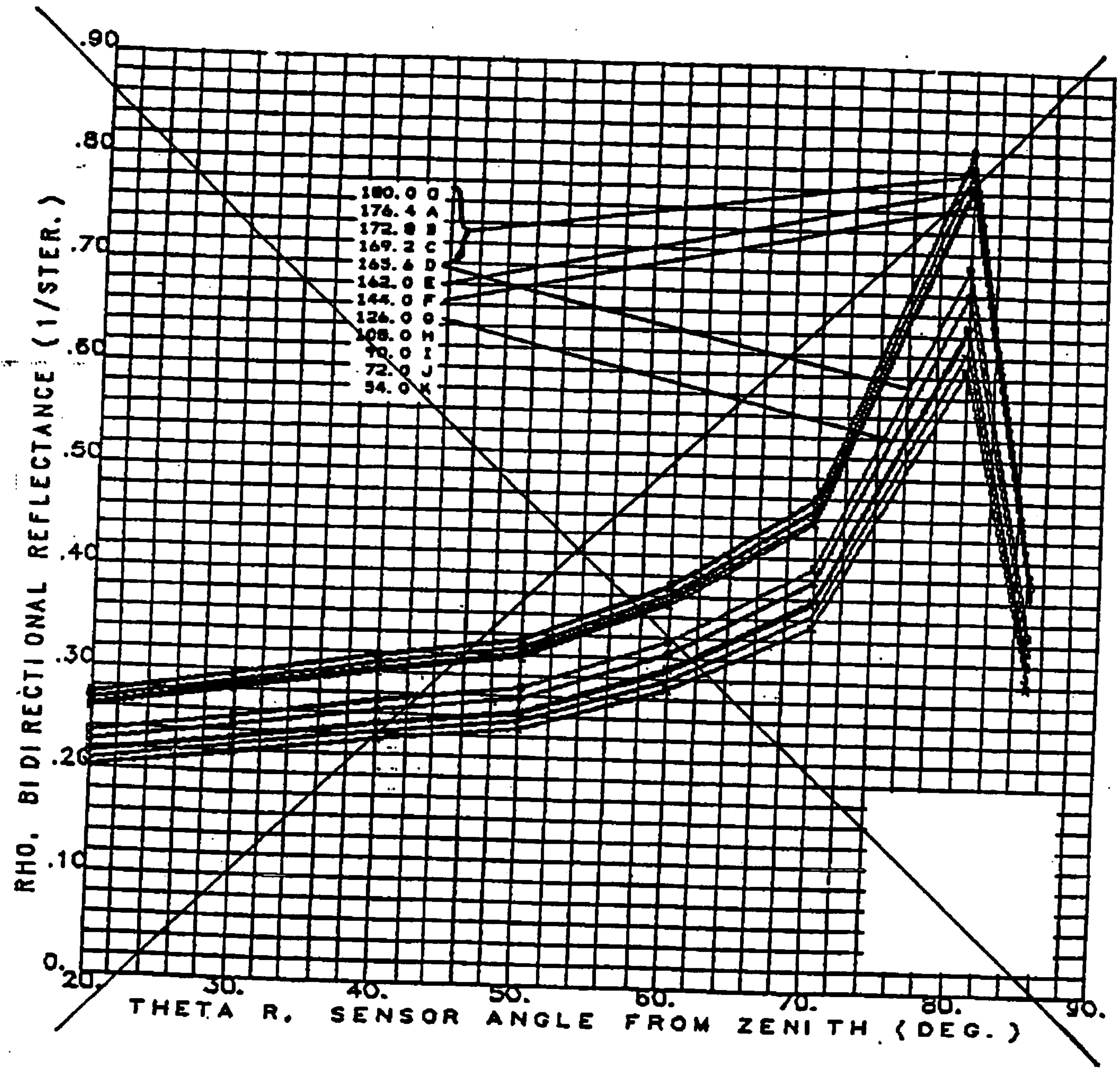


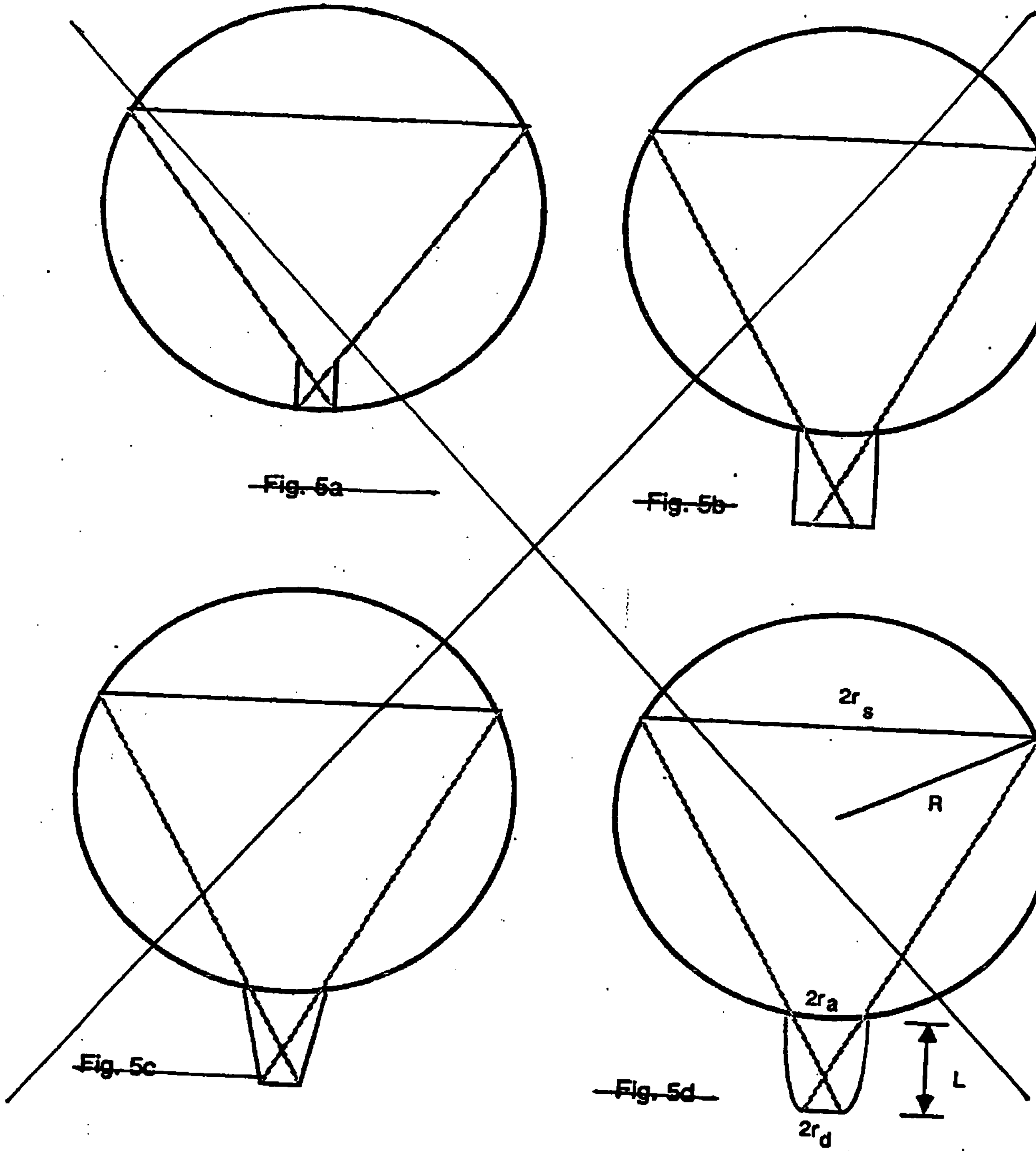
Figure 1: ~~Layout of optical bench in Mattson Cygnus 25 Fourier Transform Spectrophotometer with Labsphere integrating sphere accessory installed.~~



~~Figure 2. Scanning electron microscope pictures of the Labsphere 400 μin coating at 200X (Fig. 2a) and 500X (Fig. 2b). The newer coating used in the NRL sphere is shown at 100X magnification (Fig. 2c) and 200X magnification (Fig. 2d).~~



~~Figure 4: Bidirectional reflectance data for Labsphere 400 micro-inch diffuse gold coating. The data shown was measured at an incidence angle of 20 degrees, a wavelength of 10.6 microns, and a variety of angles in different azimuthal planes ranging from the plane of incidence (top curve) to 126 degrees out of the plane of incidence (bottom curve).~~



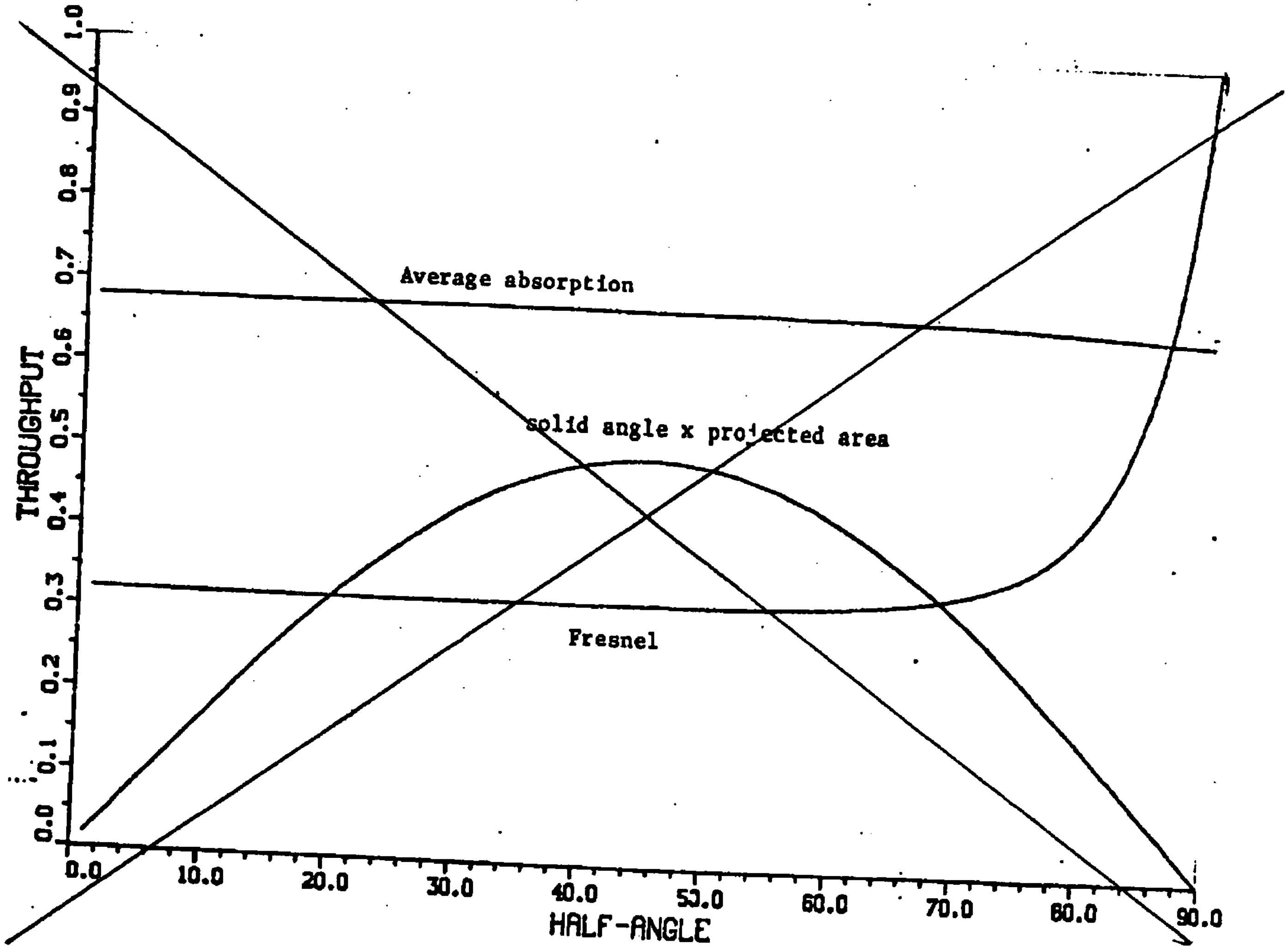
~~Fig. 5a~~

~~Fig. 5b~~

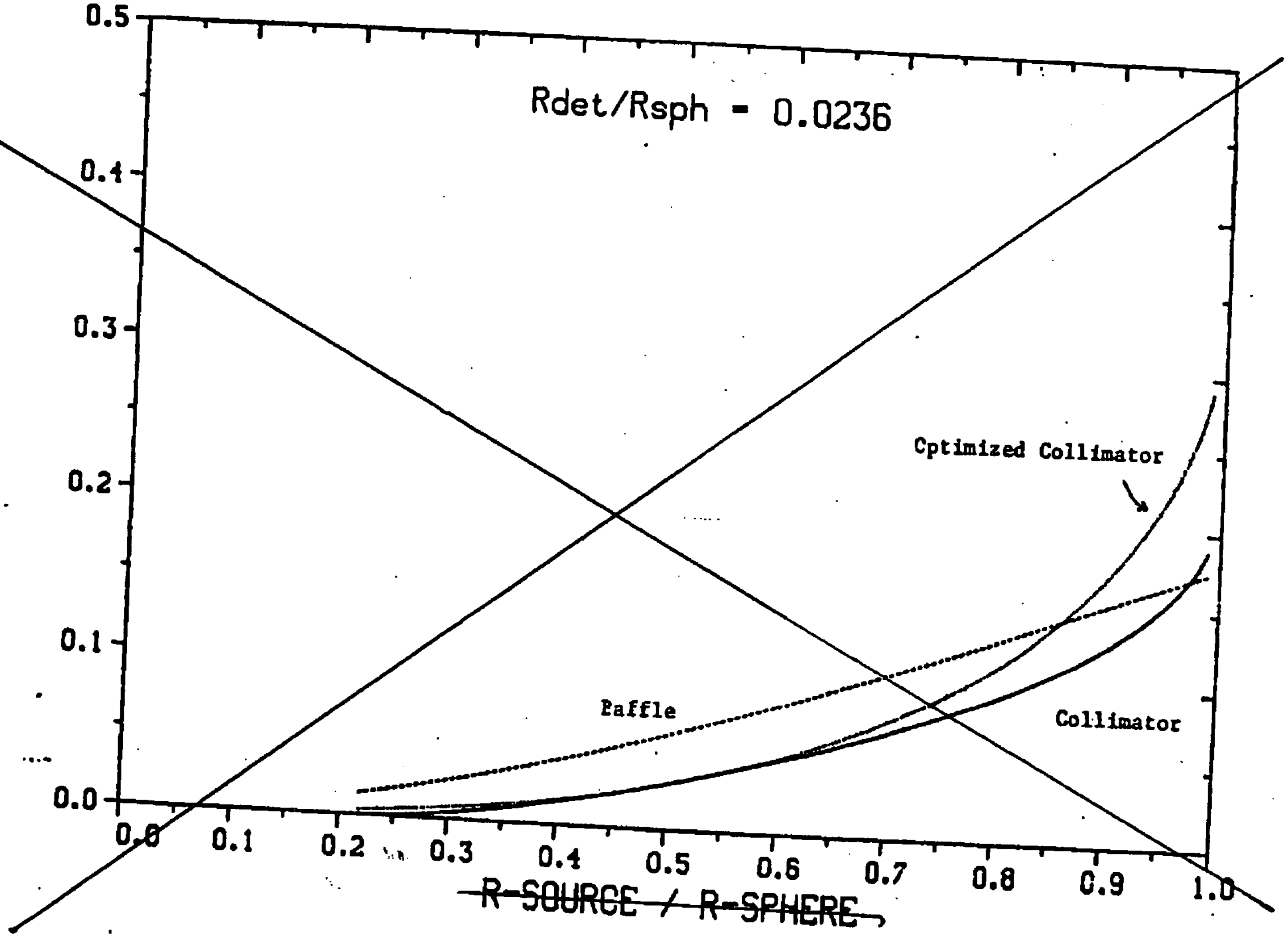
~~Fig. 5c~~

~~Fig. 5d~~

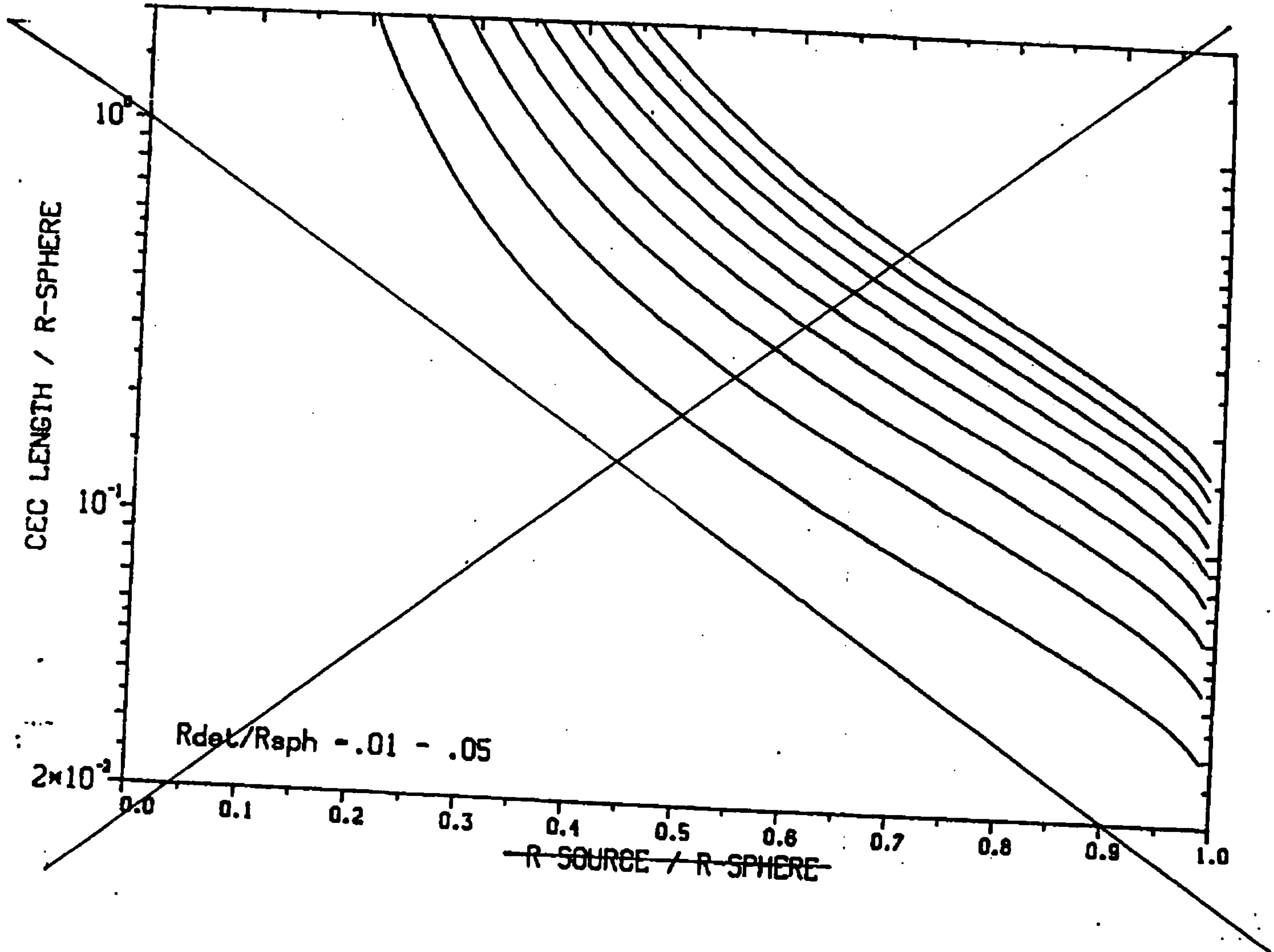
~~**Figure 5: Detector optics coupling schemes: a) baffle, b) collimator, c) reflecting cone, and d) Compound Elliptic Concentrator (CEC).**~~



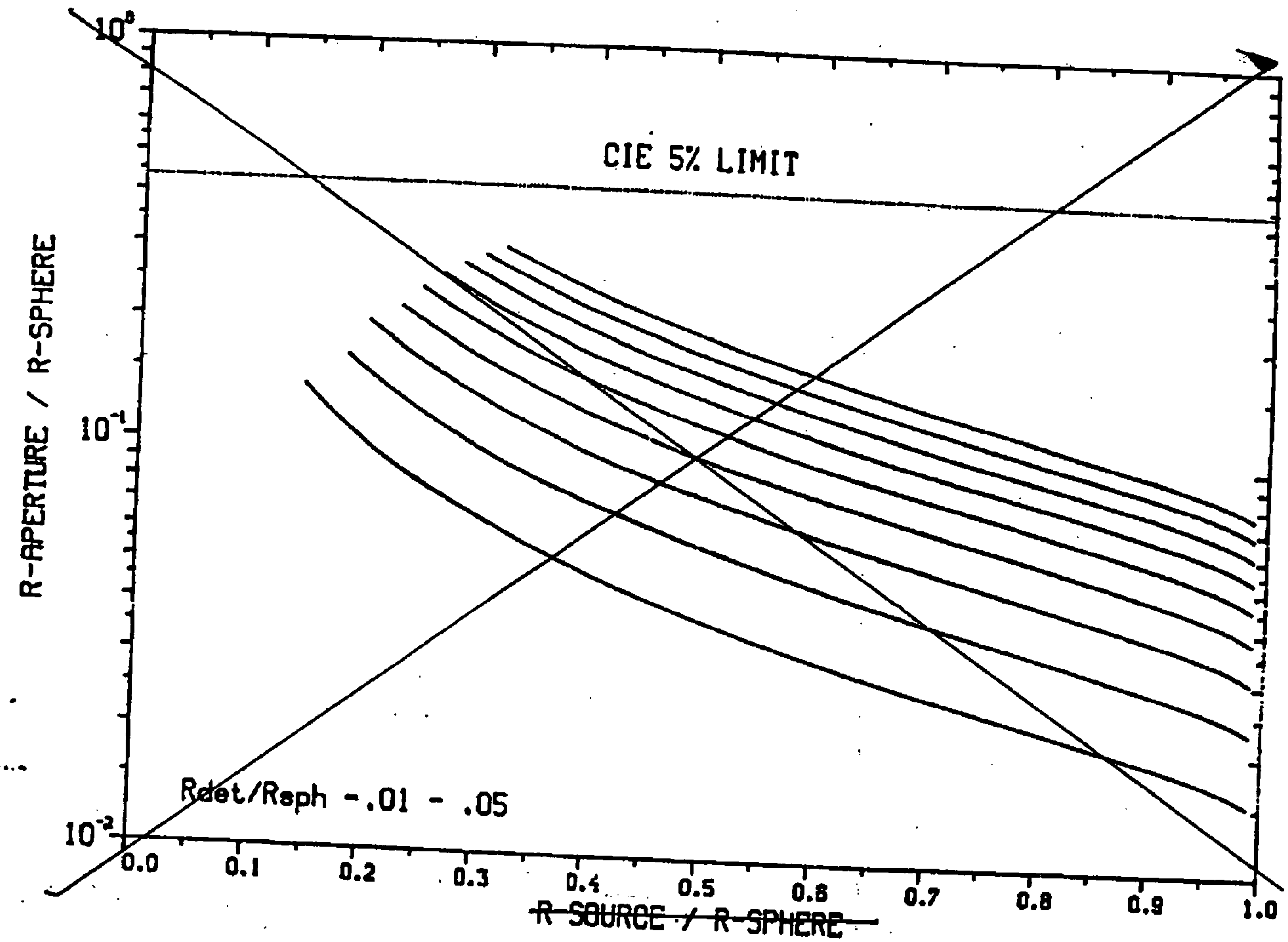
~~Figure 6: Average absorption vs. cone half angle for Lambertian illumination of a HgCdTe detector at 10 microns. The high Fresnel reflection losses at large angles do not decrease the average absorption significantly due to the projected area term in the weighting factor.~~



~~Figure 7: Integrating sphere detector optics throughput (normalized by CEC throughput) vs. source radius divided by sphere radius. For a source radius of 0.9, the CEC is over five times more efficient at collecting radiation than the optimized collimator.~~



~~Figure 8a: CEC length (normalized by sphere radius) versus source size for detector radii ranging from .01 - .05 sphere radii. As the source size approaches the CEC aperture the length goes to infinity, as expected.~~



~~Figure 8b: CRC aperture radius (normalized by sphere radius) versus source size for detector radii ranging from .01 - .05 sphere radii. The curves stop where the aperture and source radii become equal; at that point the CRC length is infinity.~~

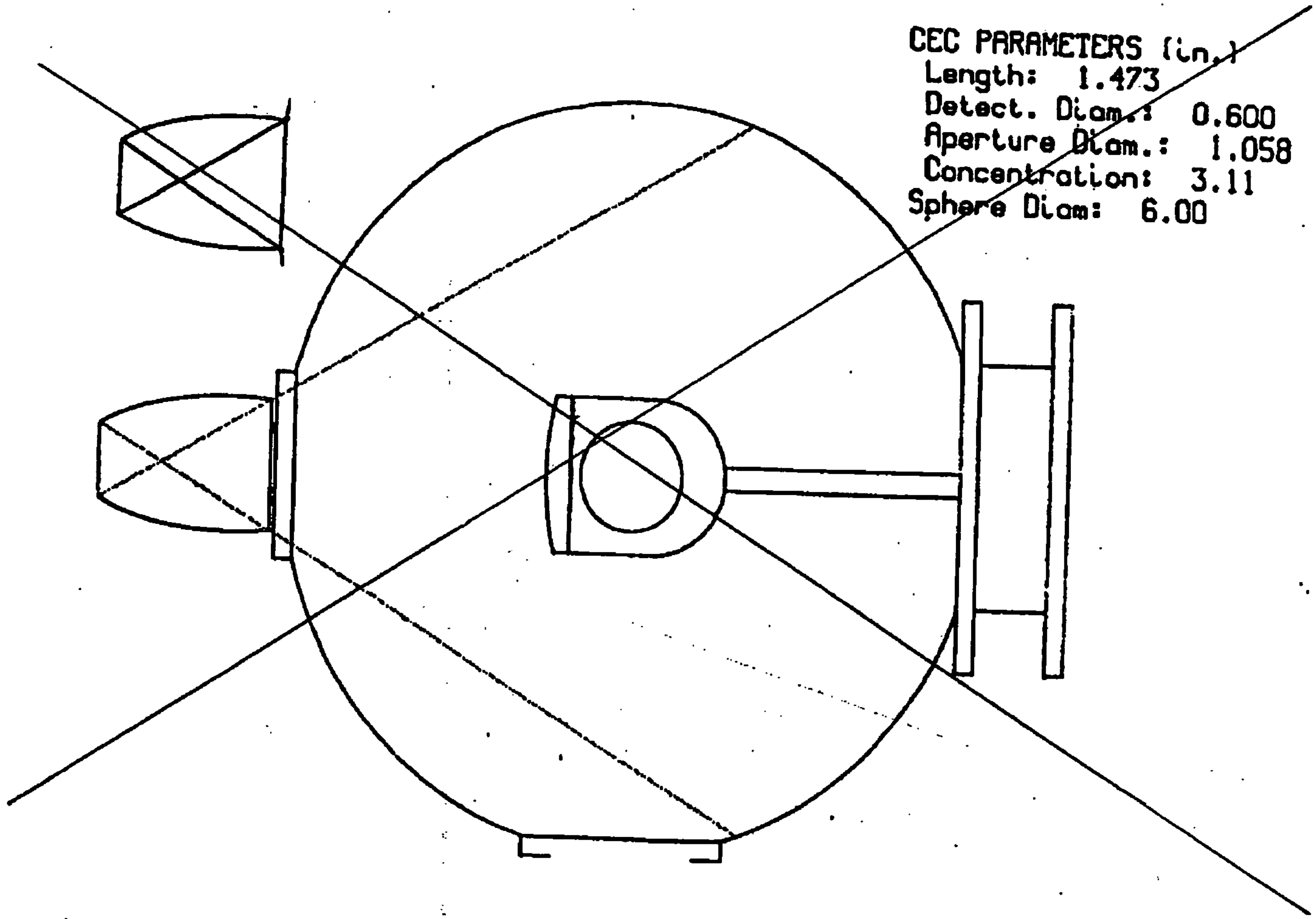


Figure 9: Effect of refraction compensation ~~on the CEC length and concentration. The~~ upper CEC was designed for the same source, ~~sphere, and detector radii as the lower, however, no cover window over the detector was assumed. The concentration and length for the upper CEC are 2.98 and 1.399 respectively, or about 4-5% less than the refraction compensated CEC.~~